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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,098	03/23/2004	Tomonori Soeda	1309.43693X00	1869
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MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C. 1800 DIAGONAL ROAD SUITE 370 ALEXANDRIA, VA 22314			EXAMINER BROUSSARD, COREY M	
			ART UNIT 2835	PAPER NUMBER

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/806,098

Applicant(s)

SOEDA ET AL.

Examiner

Corey M. Broussard

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Am

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/04 6/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 11 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 11 recites the limitation "said cables" in line 1 and "said logic board units" in line 11. There is insufficient antecedent basis for this limitation in the claim. Claim 11 also recites the words "can be" in line 3. It has been held that the recitation that an element is "capable of" performing a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchison, 69 USPQ 138.

Claim Objections

3. Claim 1 is objected to because of the following informalities: the word —are— seems to be missing between "which" and "detachably" in line 3. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claim 11 is rejected under 35 U.S.C. 102(a) as being anticipated by Guyer et al. (PN 6,583,989). With respect to claim 11 as best as it can be understood, the method for supporting cables in a disk array device is inherent in the structure of Guyer, Guyer teaches a plurality of

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logic boards (compute elements 29 inherently contain logic boards), which are detachably mounted on a chassis (15), and which can be connected respectively to a plurality of external devices via a plurality of cables (see Fig. 6), said disk array device cable support method movably disposing a plurality of cable supporting portions (35) more on the underside than in the mounting locations of said logic boards (see Fig. 10), parallel to the direction in which said logic boards are arranged (the logic boards are arranged on their sides, the cable supporting portion 35 is also arranged on its side and is parallel to the sides of the logic boards), and detachably supporting said cables respectively in said cable supporting portions in said logic boards units.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guyer et al. (PN 6,583,989) in view of Soltow et al. (PN 4,715,571). With respect to claim 1, Guyer teaches a disk array device, comprising: a chassis (15); a plurality of logic boards (compute elements 29 inherently contain logic boards), which are detachably mounted on said chassis (see Fig. 1), and which can be connected respectively to a plurality of external devices via a plurality of cables (see Fig. 4); a rail portion (rear side of 43, see Fig. 4), which is disposed on said chassis parallel to the direction in which said logic boards are arranged (the logic boards are arranged on their sides, the rack manager 43 is also arranged on its side and is parallel to the sides of the logic boards). Guyer fails to specifically teach a plurality of cable supporting portions movably disposed on said rail portion. Soltow teaches a cable supporting portion (1),

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which are movably disposed on a rail portion (84), and which detachably support cables (11, 12). It would have been obvious to one of ordinary skill in the art to combine the cable supports of Soltow with the disk array device of Guyer for the benefit of well-supported and organized cables simplifying the addition and replacement of the components of the rack.

8. With respect to claim 2, Soltow teaches wherein said cable supporting portions comprise a plurality of slots (2) capable of accommodating a plurality of kinds of cables (11, 12), the external dimensions of which differ respectively (see Fig. 1).

9. With respect to claim 3, Soltow teaches wherein said cable supporting portions comprises a plurality of slots (2), in which a plurality of cables (11, 12) connected to the same logic board can be accommodated respectively (the cable support 1 can inherently support multiple cables from the same device).

10. With respect to claim 4, Soltow teaches wherein said cable supporting portions comprise an approximately cylindrical main body (see Fig. 1, 2), a plurality of slots (2) disposed by being circumferentially spaced on the main body, and a mounting portion (83) for movably mounting said main body to said rail portion (84).

11. With respect to claim 5, Soltow teaches a fixing portion (81) for fixing said cables, which are respectively accommodated in said slots (2, col 4, 5-11, col 5, 39-46).

12. With respect to claim 6, Soltow teaches wherein through-holes for passing said cables (holes formed by slots 2), which are supported by said cable supporting portions (1), through to the lower part of said chassis (chassis of Guyer), are provided, and said through-holes are formed so as to allow said cables to move in accordance with the movement of said cable supporting portions.

13. With respect to claim 7, Soltow teaches wherein said through-holes can variably adjust the opening area in accordance with the amount of movement of said cables (see Fig. 1, spring

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clips 9a-9i and rim section 5 variably adjust the opening space for the cables 11, 12 according to size and/or movement of said cables).

14. With respect to claim 8, Guyer teaches wherein said rail portion (rear side of 43, see Fig. 4) is positioned in the vicinity of the underside of said logic boards (compute elements 69 contain logic boards), and is disposed so as not to interfere with the attachment and detachment of other members (see Fig. 2-4).

15. With respect to claim 9, Guyer teaches wherein, of said cables, the cables which are connected to the lowermost ends of said logic boards are connected to said logic boards respectively such that a preset, predetermined allowable bending radius can be maintained (see Fig. 5, the cables must inherently be maintained within an allowable bending radius in order for the cables and the device as a whole to function).

16. With respect to claim 10, Guyer teaches a chassis (15); a plurality of channel adapter boards (each compute element 29 has a pair of fiber channel connectors 49, therefore the compute element must inherently have a channel adapter board), which are detachably mounted on the approximately middle portion of said chassis in the vertical direction (see Fig. 3, elements 29 are approximately mounted in the middle portion, and are stacked in a vertical direction), and a connecting face with a host device is positioned more on the inner side than at the opening face in said chassis (see Fig. 4, 5); a plurality of cables, the one ends of which are connected to said connecting faces of said channel adapter boards (see Fig. 4, 5), and the other ends of which are connected to said host device (see Fig. 6); at the least one ore more kinds of functional components (51), which are positioned on the underside of said channel adapter boards, and detachably mounted on said chassis; a rail portion (rear side of 43, see Fig. 4), which is positioned more on the underside than in the mounting locations of said channel adapter boards so as not to interfere with the attaching and detaching of said functional

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components (see Fig. 4), and which is disposed on said chassis parallel to the direction in which said channel adapter boards are arranged (the adapter boards are arranged on their sides, the rack manager 43 is also arranged on its side and is parallel to the sides of the adapter boards), and through-holes, which are disposed on the lower part of said chassis for allowing said cables to pass through, and which enable said cables to move (the chassis must inherently have cable through-holes in order for the device to connect to other devices as shown in Fig. 6, a simple cable through hole would not restrict the movement of said cables). Guyer lacks specific teaching of wherein a plurality of cable supporting portions are movably disposed on said rail portion. Soltow teaches a cable support portion (1), which is movably disposed on a rail portion (84), and which support cables (11, 12) in a detachable condition; each said cable supporting portion comprises: an approximately cylindrical main body (see Fig. 1, 2); a plurality of slots (2), which are disposed by being circumferentially spaced on the main body (see Fig. 1), and which are capable of housing either one or a plurality of types of cables each having different external dimensions (11, 12, see Fig. 1); a mounting portion (83) for movably mounting said main body on said rail portion in a non-rotatable state; and a fixing portion (81) for fixing said cables accommodated in said respective slots by being wrapped around the outer side of said main body (col 4, 5-11, col 5, 39-46, see Fig. 1, 2, 4). It is well known and old to have a door portion, which covers the opening face in a chassis in a freely opening and closing condition, on a disk array chassis. It would have been obvious to a person of ordinary skill in the art to combine the disk array rack of Guyer with the cable support of Soltow for the benefit of well-supported and organized cables simplifying the addition and replacement of the components of the rack.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hobbs et al. (PN 5,684,671), Walker (6,445,585), and Baiza et al. (PN 6,727,164) demonstrating the well known concept of doors on electronic rack cabinets. Mc Millian (PN 4,366,939) and Kelly Jr (PN 2,902,821) teaching an alternative disk-shaped cable support structure. Jackson (6,606,253), Gallagher et al. (6,628,513), and Tirrell et al. (PN 6,791,841) teaching alternative rack mounted computer array devices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey M. Broussard whose telephone number is 571 272 2799. The examiner can normally be reached on 7:30-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on 571 272 2092. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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PRIMARY EXAMINER**